

## CLAIMS

What is claimed is:

1. A brewing apparatus comprising:

a hot water heater;

a first temperature sensor connected to the hot water heater;

a second temperature sensor connected to either a cold water inlet to the heater or a hot water outlet from the heater;

a pump connected to the cold water inlet for supplying water to the heater, the pump comprising a variable speed pump; and

a controller coupled to the pump and the sensors, wherein the controller is adapted to adjust the speed of the pump based upon signals from the sensors.

2. A brewing apparatus as in claim 1 wherein the second temperature sensor is connected to the cold water inlet to the heater.

3. A brewing apparatus as in claim 1 wherein the second temperature sensor is connected to the hot water outlet from the heater.

4. A brewing apparatus as in claim 1 wherein the pump comprises a direct drive solenoid pump.

5. A brewing apparatus as in claim 1 wherein the hot water heater comprises a fixed power heater.

6. A brewing apparatus as in claim 1 further comprising a user input section connected to the controller, the user input section being adapted to allowed a user to select one of at least three brewing modes comprising a first mode having a first quantity of water delivered by the pump and the heater at a first temperature, a second mode having a second quantity of water delivered by the pump and the heater at a second temperature, and a third mode having a third quantity of water delivered by the pump and the heater.

7. A brewing apparatus as in claim 6 wherein the first and third quantities of water are about equal, and the second quantity of water is different from the first and third quantities of water.

8. A brewing apparatus as in claim 1 further comprising a movable lid and a locking member for locking the lid in a closed position, and a switch connected to the controller for signaling when the locking member has been moved from a locked position.

9. A brewing apparatus as in claim 8 wherein the controller is adapted to discontinue supply of electricity to the hot water heater when the switch signals that the locking member has been moved from the locked position.

10. A brewing apparatus comprising:

a hot water heater;

a first temperature sensor connected to the hot water heater;

a second temperature sensor connected to a cold water inlet to the heater;

a pump connected to the cold water inlet for supplying water to the heater; and

a system for maintaining water temperature of water exiting the heater, the system comprising a controller coupled to the sensors, wherein the pump is a variable speed pump, wherein power when the hot water heater is ON is supplied as a substantially fixed non-varying power, and wherein the controller is adapted to provide hot water from the heater at a uniform first temperature by varying speed of the pump without varying power supply to the heater.

11. A brewing apparatus as in claim 10 wherein the pump comprises a direct drive solenoid pump.

12. A brewing apparatus as in claim 10 further comprising a user input section connected to the controller, the user input section being adapted to allow a user to select one of at least three brewing modes comprising a first mode having a first quantity of water delivered by the pump and the heater at a first temperature, a second mode having a second quantity of water delivered by the pump and the heater at a second temperature, and a third mode having a third quantity of water delivered by the pump and the heater at a third temperature.

13. A brewing apparatus as in claim 12 wherein the first and second temperatures are about equal.

14. A brewing apparatus as in claim 12 wherein the first and third quantities of water are about equal, and the

second quantity of water is different from the first and third quantities of water.

15. A brewing apparatus as in claim 10 further comprising a movable lid and a locking member for locking the lid in a closed position, and a switch connected to the controller for signaling when the locking member has been moved from a locked position.

16. A brewing apparatus as in claim 15 wherein the controller is adapted to discontinue supply of electricity to the hot water heater when the switch signals that the locking member has been moved from the locked position.

17. A brewing apparatus comprising:

- a controller;

- a hot water heater connected to the controller;

- a water pump connected to the controller for supplying water to the hot water heater; and

- a user input section connected to the controller, the user input section being adapted to allow a user to select one of at least three brewing modes comprising a first mode having a first quantity of water delivered by the pump and the heater at a first temperature, a second mode having a second quantity of water delivered by the pump and the heater at a second temperature, and a third mode having a third quantity of water delivered by the pump and the heater at a third temperature, wherein the first and second temperatures are about equal,

and wherein the first and third quantities of water are about equal.

18. A brewing apparatus as in claim 17 further comprising a first temperature sensor connected to the hot water heater; and a second temperature sensor connected to either a cold water inlet to the heater or a hot water outlet from the heater.

19. A brewing apparatus as in claim 17 wherein the pump comprises a direct drive solenoid pump.

20. A brewing apparatus as in claim 17 wherein the hot water heater comprises a fixed power heater.

21. A brewing apparatus as in claim 17 further comprising a system for maintaining water temperature of water exiting the heater, wherein power when the hot water heater is ON is supplied as a substantially fixed non-varying power, and wherein the controller is adapted to provide hot water from the heater at a substantially uniform first temperature by varying speed of the pump without varying power supply to the heater.